What is claimed is:

1. A portable gas sensor having a sensing material reacting to a target gas, comprising:

a mode input unit for selecting an operation mode;

a gas injecting unit bringing in an external gas;

a sensing unit outputting a voltage value corresponding to a changed resistance value of the sensing material due to a reaction between the sensing material and the injected external gas;

a first memory storing a reference voltage value corresponding to a resistance value of the sensing material with respect to a reference gas;

a calibration control unit for storing a first voltage value in the first memory by replacing the reference voltage value stored in the first memory through an operation of a calibration mode initiated in response to an input from the mode input unit, the first voltage value corresponding to the changed resistance value of the sensing material reacting with a substitutionary reference gas;

a target gas sensing control unit for storing a second voltage value in a second memory by operating a target gas measurement operation mode initiated in response to an input of the mode input unit, the second voltage value corresponding to a changed resistance value of the sensing material reacting with the target gas transferred through the gas injecting unit;

a comparison and calculation unit for comparing the first voltage value with the second voltage value and estimating the comparison value; and

a display unit displaying a concentration of the target gas estimated from the comparison and calculation unit.

2. The portable gas sensor as recited in claim 1,

further comprising a third memory for storing a lookup table for determining a concentration of the target gas depending on a value difference between the first voltage value and the second voltage value.

3. The portable gas sensor as recited in claim 1, wherein the substitutionary reference gas is a human breath or air/atmosphere.

4. The portable gas sensor as recited in claim 1, wherein the mode input unit selects an operation mode by using a time difference in pressing a power button.

5. A method for calibrating a portable gas sensor having a sensing material reacting to a target gas, comprising the steps of:

storing a reference voltage value corresponding to a resistance value of the sensing material with respect to a reference gas in a memory;

inputting a calibration operation mode by maneuvering a key operation;

measuring a fist voltage corresponding to a resistance value of the sensing material with respect to a substitutionary reference gas; and

storing the first voltage value in the memory by replacing the stored reference voltage value.

6. The method as recited in claim 5, wherein the substitutionary reference gas is a human breath or air/atmosphere.

7. A computer readable recording medium storing instructions for implementing the method for calibrating the portable gas sensor having the sensing material reacting to the target gas, the computer readable recording medium comprising the instructions of:

storing a reference voltage value corresponding to a resistance value of the sensing material with respect to a reference gas;

inputting a calibration operation mode by maneuvering a key operation;

measuring a fist voltage corresponding to a resistance value of the sensing material with respect to a substitutionary reference gas; and

storing the first voltage value in the memory by replacing the stored reference voltage value.